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10/825,205	04/16/2004	Sung-Su Jung	8734.294.00 US	7679

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MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER
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FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1791

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07/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18, 19 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Yamada et al. (JP 2002-258299, provided in IDS).

As to claim 34, the Admitted Prior Art discloses a method of fabricating a liquid crystal display panel by forming a thin film transistor array substrate, forming a color filter substrate, dispensing a material through a plurality of syringes (301A, 301B, 301C) and their respective nozzles (302A, 302B, 302C) onto at least one of the substrates, and joining the substrates (Figure 3; sections [0012, 0016-0017]). The film transistor array substrate has a plurality of liquid crystal display panels and the color filter has a plurality of liquid crystal display panels ([0009] [0010], [0012] and Figure 1). It is unclear as to whether the Admitted Prior Art teaches a syringe having a plurality of nozzles where at least one of the nozzles can move with respect to a position of the body of the syringe where the material can be dispensed from the nozzles at the same time.

Yamada teaches it being known in the art of liquid crystal display manufacture to use a dispensing apparatus comprising a syringe having a body (8) for containing a

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dispensing material and a plurality of nozzles (10) at one end of the body to supply the material onto a substrate (Figure 1; section [0022] at top of p. 13). At least one of the nozzles can be moved with respect to the body to adjust the size of a dispensed pattern and the material can be dispensed from the plurality of nozzles simultaneously (Figure 5; portion of section [0010] at top of p. 10; section [0036]). This makes it possible to drop the liquid crystal in a specified pattern and quantity.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a dispensing apparatus where the syringe has a plurality of nozzles connected to it's body portion such that at least one of the nozzles moves with respect to the body and the plurality of nozzles dispense the material simultaneously when manufacturing the LCD panel of the Admitted Prior Art because such is known in the art, as evidenced by Yamada, where this allows one to drop the liquid crystal in a specified pattern and quantity.

One would appreciate using the dispenser of Yamada to drop liquid crystal into the plurality of liquid crystal display panels of the admitted prior art because they are arranged in a pattern and Yamada discloses a dispenser capable of simultaneously dropping the liquid crystal in a pattern.

As to claim 18, all the limitations were addressed above with respect to claim 34, except a connection portion to couple the nozzles with the body portion. Yamada teaches connection portion (11) (Figure 1; section [0022] at top of p. 13).

As to claims 19 and 35, the Admitted Prior Art in view of Yamada teaches such.

### ***Response to Arguments***

3. Applicant's arguments filed May 20, 2008 have been fully considered but they are not persuasive.

Applicant argues that Yamada fails to teach or suggest at least “wherein one nozzle dispense the material onto one liquid crystal panel so that one syringe dispenses the material onto a plurality of liquid crystal panels at the same time”.

As detailed in the rejection above, the method of the APA involves the use of a plurality of nozzles (one for each liquid crystal panel). In this instance, though, each nozzle is associated with a specific syringe and thus, each syringe only applies material onto a single crystal panel. Yamada, on the other hand, suggests the known use of a system (in the liquid crystal panel environment) in which multiple nozzles are associated with a single syringe (see Figures). One of ordinary skill in the art at the time of the invention would have been amply motivated to use a single syringe with a plurality of nozzles since the environment recognizes such an assembly and furthermore, it would eliminate the need to include multiple syringes. Given the structure of the APA, modifying the method of the APA would include a single syringe having a plurality of nozzle attached thereto. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed method. Lastly, in view of Yamada, there are only two possible modifications: including multiple nozzles in each syringe of the APA or include a single syringe with a plurality of nozzles- the fact that there are only a limited number of possibilities further suggests that the claimed invention would have been obvious in view of Yamada.

### ***Conclusion***

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4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Justin Fischer  
/Justin R Fischer/  
Primary Examiner, Art Unit 1791  
July 24, 2008